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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/666,184	KLEIN, DEAN A.	
	Examiner	Art Unit	
	JOHN R. SCHNURR	2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Amendment After Non-Final Rejection filed 02/17/2009. Claims 1-51 are pending and have been examined.

Response to Arguments

2. Applicant's arguments filed 02/17/2009 have been fully considered but they are not persuasive.

In response to applicant's argument (Remarks pg. 12 para. 3 to pg. 13 para. 2) that the cited references do not teach a notch filter that filters both incoming and outgoing signals, the examiner respectfully disagrees. Freadman (US 6,288,749) clearly teaches a notch filter with a first and second port (Fig. 1 notch filter 62) filtering incoming video signals (col. 3 lines 52-62). Sanders teaches a notch filter (Fig. 3) being used to filter a portion of the outgoing signals (col. 4 line 57 to col. 5 line 67). Therefore, the combination of the references teaches a notch filter filtering both incoming and outgoing signals.

In response to applicant's argument (Remarks pg. 13 para. 3-5) that the cited references do not teach filtering incoming video signals, filtering outgoing local area network signals and allowing transmission of local area network signals within the filtered band of video signals, the examiner respectfully disagrees. The combination of Freadman and Sanders teaches filtering incoming and outgoing signals as discussed above. Freadman further teaches allowing transmission of local area network signals within the filtered band of video signals (col. 3 lines 36-48 and col. 4 lines 22-30).

In response to applicant's argument (Remarks pg. 14 para. 1-3) that the cited references do not teach a frequency converter that receives transmissions from the local area network at a first frequency and transmits the signals at a second frequency, the first and second frequencies being within the filtered portion of the video signals, the examiner respectfully disagrees. Freeman clearly teaches local area network signals being transmitted in the filtered band of the video signals (col. 3 lines 36-48 and col. 4 lines 22-30). Smith (US 6,195,530) teaches a frequency converter receiving local area network signals at a first frequency and transmitting the signals at a second frequency (col. 4 lines 36-57).

In response to applicant's argument (Remarks pg. 14 para. 1-3) that the examiner has not established a prima facie case of obviousness because the cited references do not teach the following claim limitations: 1) a notch filter that filters having two ports that both block incoming video signals and outgoing local area network signals, 2) a notch filter that allows transmission of local area network signals in the bands block by the notch filter, and 3) a frequency converter that receives local area network signals with a first frequency and sends local area network signals within a second frequency wherein the first and second frequencies are within a filtered band. These limitations are met as described above with respect to the applicant's previous arguments.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims **1-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)**, herein Smith, in view of **Decker et al. (US Patent 6,009,465)**, herein Decker, further in view of **Sanders et al. (US Patent 5,742,713)**, herein Sanders.

Consider **claim 1**, Freadman clearly teaches a network bus comprising:

> a notch filter coupled to a cable, **(Fig. 1: Signal converted 20 contains a notch filter, column 3 lines 52-62.)** said cable routed in a tree configuration to a plurality of locations of a building, **(Fig. 1: The plurality of locations in Fig. 1 are in a tree configuration and the locations are in the same building, column 3 lines 63-67.)** said notch filter comprising a first port in communication with an external source, said notch filter configured to filter out a portion of video signals carried by said cable; **(column 3 lines 52-62)**

Freadman further teaches a second port on said notch filter **(Output 11 from computer 10 is input to the filter, col. 3 lines 36-48.)**, modulating data to the notched frequency for distribution over the network **(column 3 lines 36-48)** and communication between the network devices **(column 4 lines 22-30)**. However, Freadman does not explicitly teach a frequency converter, coupled to coaxial cable, configured to receive signals from said tree configuration at a first frequency and to forward said signals within said tree configuration at a second frequency, wherein said first and second frequencies are within said filtered out portion.

In an analogous art, Smith, which discloses a local video distribution network, clearly teaches the network comprises a tree configuration using coaxial cable **(Fig. 1 transmission link 6, column 3 lines 46-50)**, a frequency converter receiving signals from the tree configuration at a first frequency, converting the signals to a second frequency and transmitting the signals back to the tree configuration, wherein the first and second frequencies are within the filtered out portion. **(Fig. 1: Addressable transmitter/receiver 10 receives signals from the terminals 7, 8 or 9 over link 6 at a first frequency and transmits data to the terminals over the link 6 at a separate frequency, column 4 lines 36-57.)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by modulating upstream and downstream communications in separate frequencies, as taught by Smith, for the benefit of eliminating the upstream RF link of Freadman.

However, Freadman and Smith do not explicitly teach a plurality of computers coupled to said wire.

In an analogous art, Decker, which discloses a system for a local area network wherein filtered signals are displayed on a television set, clearly teaches a plurality of computers coupled to said wire. **(column 12 lines 16-19 Decker)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Smith by utilizing a plurality of computers coupled to said wire, as taught by Decker, for the benefit of providing the user with added interactive functionality.

Freadman further teaches receiving and filtering the local area network computer signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman, Smith and Decker do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman, Smith and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 2**, Freadman combined with Smith, Decker and Sanders, as in claim 1, clearly teaches said frequency converter is configured to forward said signals via said coaxial cable. **(Fig. 1 transmission link 6, column 3 lines 46-50 Smith)**

Consider **claim 3**, Freadman combined with Smith, Decker and Sanders, as in claim 1, clearly teaches said building comprises a residential building. **(Any type of building may be used, column 3 lines 63-67 Freadman.)**

Consider **claim 4**, Freadman combined with Smith, Decker and Sanders, as in claim 1, clearly teaches said video signals are delivered to said coaxial cable from a headend equipment of a community antenna television system. **(column 3 lines 23-25 Freadman)**

Consider **claim 5**, Freadman combined with Smith, Decker and Sanders, as in claim 1, clearly teaches said filtered out portion comprises a frequency range from approximately 50MHz to approximately 750MHz. **(The notch filter filters out a television channel, column 3 lines 52-62 Freadman.)**

5. Claims **6-9 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)** further in view of **Sanders et al. (US Patent 5,742,713)**.

Consider **claim 6**, Freadman clearly teaches a local area computer network comprising:

a notch filter comprising a first port configured to receive a signal from a cable television transmission system **(column 3 lines 23-25 Freadman)** and to filter out at least one portion of said signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal; **(Fig. 1: Signal converted 20 contains a notch filter, which filters out a television channel, column 3 lines 52-62.)**

a community antenna television wire configured to receive said filtered signal and routed in a tree configuration to a plurality of locations of a residence, said wire in communication with a second port **(Output 11 from computer 10 is input to the filter, col. 3 lines 36-48.)** of said notch filter; **(Fig. 1: The plurality of locations in Fig. 1 are in a tree configuration and the locations are in the same building, column 3 lines 63-67.)**

Freadman further teaches modulating data to the notched frequency for distribution over the network **(column 3 lines 36-48)** and communication between the network devices **(column 4 lines 22-30)**. However, Freadman does not explicitly teach a plurality of computers coupled to said wire, each of said computers having a modem configured to receive and transmit broadband signals between said computers within said tree configuration; wherein said computers are configured to send and receive communications between different ones of said computers via said modems by modulating a carrier having a frequency within said filtered out portion.

In an analogous art, Smith, which discloses a local video distribution network, clearly teaches the network comprises a tree configuration **(Fig. 1 transmission link 6, column 3 lines 46-50)**, a plurality of computers coupled to the wire each having a modem for transmission of broadband signals between the computers over the tree configuration, wherein said computers are configured to send and receive communications between different ones of said computers via said modems by modulating a carrier. **(Fig. 2: Each of the terminals 7, 8 or 9 contains up/down converter 201, demodulator 202 and data receiver 203 for demodulating data received from the network and modulating data to be transmitted via the network, column 5 lines 13-34.)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by using modems within a group of computers for modulating upstream and downstream communications in separate frequencies, as taught by Smith, for the benefit of eliminating the upstream RF link of Freadman.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman and Smith do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Smith by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 7**, Freadman combined with Smith and Sanders, as in claim 6, clearly teaches the computers are configured to send said upstream signals to said cable television transmission system using a carrier frequency in the range of approximately 0 MHz to approximately 50 MHz. **(column 4 lines 16-50 Sanders)**

Consider **claim 8**, Freadman combined with Smith and Sanders, as in claim 6, clearly teaches said modems are configured to receive a signal at a first

frequency and to transmit said signal at a second frequency, **(Fig. 2: Each of the terminals 7, 8 or 9 contains up/down converter 201, demodulator 202 and data receiver 203 for demodulating data received from the network and modulating data to be transmitted via the network, column 5 lines 13-34 Smith.)** wherein said first and second frequencies are within said filtered out portion. **(Data communication takes place in the filtered portion of the spectrum, column 3 lines 36-62 Freadman.)**

Consider **claim 9**, Freadman combined with Smith and Sanders, as in claim 6, clearly teaches a frequency converter configured to convert signals from said first frequency to said second frequency. **(Fig. 1: Addressable transmitter/receiver 10 receives signals from the terminals 7, 8 or 9 over link 6 at a first frequency and transmits data to the terminals over the link 6 at a separate frequency, column 4 lines 36-57 Smith.)**

Consider **claim 12**, Freadman combined with Smith and Sanders, as in claim 6, clearly teaches at least one of said computers is configured to receive signals from said transmission system using a carrier frequency in the range of approximately 0 MHz to approximately 50 MHz. **(column 4 lines 43-50 Sanders)**

6. Claims **13-33 and 42-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Decker et al. (US Patent 6,009,465)** further in view of **Sanders et al. (US Patent 5,742,713)**.

Consider **claim 13**, Freadman clearly teaches a local area network comprising:

routing community antenna television wiring in a tree configuration to different parts of a structure; **(Fig. 1: Data from broadcast source 100 is routed in a tree configuration to televisions 30 located within a structure, column 3 lines 23-25; lines 62-67.)**

coupling a notch filter comprising a first port to said wiring for filtering out one or more bands of frequencies associated with one or more television broadcasts delivered to said wiring by a service drop of a community antenna television distribution system; **(Fig. 1: Signal converted 20 contains a notch filter, which filters out a television channel, column 3 lines 52-62.)**

Freadman further teaches a second port of the notch filter coupled to computing devices **(Outputs 11 from computers 10 are input to the filter, col. 3 lines 36-48.)** and messages may be transmitted between the television sets in the filtered

frequencies. **(column 4 lines 28-30)** To accomplish this data must be modulated and demodulated by the television sets.

However, Freadman does not explicitly teach a plurality of computers coupled to said wire.

In an analogous art, Decker, which discloses a system for a local area network wherein filtered signals are displayed on a television set, clearly teaches a plurality of computers coupled to said wire. **(column 12 lines 16-19 Decker)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by utilizing a plurality of computers coupled to said wire, as taught by Decker, for the benefit of providing the user with added interactive functionality.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman and Decker do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 14**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches each of at least some of said computing devices comprises a receiver configured to receive video signals from said headend transmission equipment, **(column 3 lines 23-25)** and a modem configured to receive and transmit broadband signals between said computing devices. **(column 4 lines 28-30)**

Sanders further teaches a transmitter for forwarding signals to said headend transmission equipment. **(column 4 lines 16-50)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by communicating an upstream message, as taught by Sanders, for the benefit of providing a means for the user to communicate with the headend.

Consider **claim 15**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches computing devices comprise a computer and a microprocessor controlled appliance. **(column 12 lines 16-23 Decker)**

Consider **claim 16**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches said computing devices comprise an alarm system. **(Any device capable of transmitting sensory data may be used, column 12 lines 16-19 Decker.)**

Consider **claim 17**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches said filtered out television broadcasts comprise a portion of the frequency range between approximately 50 MHz to 750 MHz. **(Television channels are located in the range of 50-750 MHz.)**

Consider **claims 18/14, 18/15, 18/16, 18/17**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches said building comprises a residential building. **(Any type of building may be used, column 3 lines 63-67 Freadman.)**

Consider **claim 19**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches at least some of said computing devices transmit communications at a first frequency and receive communications at a second frequency, wherein said first and second frequency are within said filtered out television broadcasts. **(Television sets 30 receive signals modulated at a television channel frequency and may communicate with each other, column 4 lines 22-30 Freadman.)**

Consider **claim 20**, Freadman clearly teaches a local area network comprising:

> coupling a notch filter comprising a first port to wiring carrying television signals, wherein the coaxial wiring is routed in a tree configuration to a plurality of locations in a building; **(Fig. 1: Data from broadcast source 100 is sent to Signal converted 20, which contains a notch filter, then routed in a tree configuration to televisions 30 located within a structure, column 3 lines 23-25; lines 62-67.)**
>
> filtering out a frequency band comprising a portion of said television signals with the notch filter; **(column 3 lines 52-62)**

> establishing two-way communications between at least two computing devices within the building and connected via the tree configuration, wherein said two-way communications are coupled to the second port of said notch filter **(Outputs 11 from computers 10 are input to the filter, col. 3 lines 36-48.)**, wherein said communications are carried at least in part over said wiring utilizing said filtered out frequency band. **(column 4 lines 28-30)**

However, Freadman does not explicitly teach said cable is a coaxial cable.

In an analogous art, Decker, which discloses a system for a local area network wherein filtered signals are displayed on a television set, clearly teaches the use of coaxial cable to transmit data. **(column 5 lines 1-2)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by using coaxial cable, as taught by Decker, because both references teach methods of distributing data in a network it would have been obvious to substitute one cable type for another to achieve the predictable result of transmitting data.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman and Decker do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claims 21 and 22**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches said building comprises a residential building and said residential building comprises a plurality of rooms of a residence.. **(Any type of building may be used, column 3 lines 63-67 Freadman.)**

Consider **claim 23**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches said television signals are delivered to said building via a service drop of a community antenna television system. **(column 3 lines 23-25 Freadman)**

Consider **claim 24**, see claim 17.

Consider **claim 25**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches blocking at least some of said communications from being transmitted outside said local area network via said service drop. **(Fig. 1: Signal converter 20 contains a comb filter 61 Freadman.)**

Consider **claim 26**, see claim 19.

Consider **claim 27**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches providing a frequency converter configured to receive said communications at said first frequency and to forward said communications at said second frequency. **(Fig. 1: Signal converter 20 converts signals from one frequency to another frequency, column 3 lines 37-41 Freadman.)**

Consider **claim 28**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches one of the computing devices sends a communication to another of the computing devices at a first frequency, and wherein said another computing device receives said communication at a second frequency. **(Computing devices receive data on a channel frequency and transmit data via a separate frequency, column 4 lines 22-36 Freadman.)**

Consider **claim 29**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches the method of claim 23.

Decker further teaches said computing devices comprise a network computer. **(column 12 lines 16-19 Decker)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by utilizing a plurality of computers coupled to said wire, as taught by Decker, for the benefit of providing the user with added interactive functionality.

Consider **claim 30**, see claim 29.

Consider **claim 31**, see claim 16.

Consider **claim 32**, see claim 29.

Consider **claim 33**, see claims 30-32.

Consider **claim 42**, Freadman clearly teaches a local area network comprising:

> receiving a television signal from a headend transmission equipment of a cable television transmission system; **(Fig. 1: Data from broadcast source 100 is routed to televisions 30, column 3 lines 23-25.)**
>
> filtering out with a notch filter connected via first port to said television signal to filter a portion of said television signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal; **(Fig. 1: Signal converted 20 contains a notch filter, which filters out a television channel, column 3 lines 52-62.)**
>
> coupling said filtered signal to unlooped cable television wiring that is in communication with a second port of said notch filter; **(Fig. 1: Data from broadcast source 100 is routed in a tree configuration to televisions 30, column 3 lines 23-25. Outputs 11 from computers 10 are input to the filter, col. 3 lines 36-48.)**

Freadman further teaches messages may be transmitted between the television sets in the filtered frequencies. **(column 4 lines 28-30)** To accomplish this data must be modulated and demodulated by the television sets.

However, Freadman does not explicitly teach a plurality of computers coupled to said wire.

In an analogous art, Decker, which discloses a system for a local area network wherein filtered signals are displayed on a television set, clearly teaches a plurality of computers coupled to said wire. **(column 12 lines 16-19 Decker)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by utilizing a plurality of computers coupled to said wire, as taught by Decker, for the benefit of providing the user with added interactive functionality.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman and Decker do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 43**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches each of at least some of said computing devices comprises a receiver configured to receive video signals from said headend transmission equipment, **(column 3 lines 23-25)**

Sanders further teaches a transmitter for forwarding signals to said headend transmission equipment. **(column 4 lines 16-50)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by communicating an upstream message, as taught by Sanders, for the benefit of providing a means for the user to communicate with the headend.

Consider **claim 44**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches personal computers sending signals over a network.

Sanders further teaches using a carrier frequency in the range of 0-50 MHz. **(column 4 lines 16-50)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by communicating an upstream message using a carrier frequency in the range of 0-50 MHz, as taught by Sanders, for the benefit of providing a means for the user to communicate with the headend.

Consider **claim 45**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches said building comprises a residential building. **(Any type of building may be used, column 3 lines 63-67 Freadman.)**

Consider **claim 46**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches a local area network.

Decker further teaches the use of coaxial cable to transmit data. **(column 5 lines 1-2)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by using coaxial cable, as taught by Decker, because both references teach methods of distributing data in a network it would have been obvious to substitute one cable type for another to achieve the predictable result of transmitting data.

Consider **claim 47**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches said computing devices comprise a network computer. **(column 12 lines 16-19 Decker)**

Consider **claim 48**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches said modem in configured to receive communications at a first frequency and to send communications at a second frequency. **(Computing devices receive data on a channel frequency and transmit data via a separate frequency, column 4 lines 22-30 Freadman.)**

Consider **claim 49**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches coupling a frequency converter to said wiring, wherein said frequency converter receives a communication at a first frequency and forwards said communication at a second frequency. **(Fig. 1: Signal converter 20 converts signals from one frequency to another frequency, column 3 lines 37-41 Freadman.)**

Consider **claim 50**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches said computing devices comprise a personal computer. **(column 12 lines 16-19 Decker)**

Consider **claim 51**, see claim 50.

7. Claims **34, 35 and 38-41** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)** further in view of **Coutinho (US Patent 5,760,822)** and further in view of **Sanders et al. (US Patent 5,742,713)**.

Consider **claim 34**, Freadman clearly teaches a network device comprising:

a receiver for receiving a television signal from a community antenna television system; **(column 3 lines 23-25)**

> a notch filter in communication with said television signal via a first port, said notch filter configured to block at least one stop frequency band within the received television signal; **(column 3 lines 49-62)**

Freadman further teaches a second port of the notch filter coupled to computing devices **(Outputs 11 from computers 10 are input to the filter, col. 3 lines 36-48.)** and modulating data to the notched frequency for distribution over the network **(column 3 lines 36-48)** and communication between the network devices **(column 4 lines 22-30)**. However, Freadman does not explicitly teach a modem configured to receive and transmit broadband signals between said computers within said tree configuration; wherein said computers are configured to send and receive communications between different ones of said computers via said modems by modulating a carrier having a frequency within said filtered out portion.

In an analogous art, Smith, which discloses a local video distribution network, clearly teaches the network comprises a tree configuration **(Fig. 1 transmission link 6, column 3 lines 46-50)**, a plurality of computers coupled to the wire each having a modem for transmission of broadband signals between the computers over the tree configuration, wherein said computers are configured to send and receive communications between different ones of said computers via said modems by modulating a carrier. **(Fig. 2: Each of the terminals 7, 8 or 9 contains up/down converter 201, demodulator 202 and data receiver 203 for demodulating data received from the network and modulating data to be transmitted via the network, column 5 lines 13-34.)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by using modems within a group of computers for modulating upstream and downstream communications in separate frequencies, as taught by Smith, for the benefit of eliminating the upstream RF link of Freadman.

However, Freadman and Smith do not explicitly teach a transmitter for forwarding signals to said headend transmission equipment.

In an analogous art, Coutinho, which discloses a system for transmitting data to a local in-building network, clearly teaches a transmitter for forwarding signals to said headend transmission equipment. **(column 5 lines 23-50)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Smith by communicating an upstream message, as taught by Coutinho, for the benefit of providing a means for the user to communicate with the headend.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman, Smith and Coutinho do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 35**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly teaches said modem is configured to receive signals at a first frequency and to transmit said signals at a second frequency. **(Computing devices receive data on a channel frequency and transmit data via a separate frequency, column 4 lines 22-30 Freadman.)**

Consider **claim 38**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly said receiver is configured to receive signals in the range of approximately 50 to 750 MHz. **(Television channels are located in the range of 50-750 MHz.)**

Consider **claim 39**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly teaches said network device comprises a microprocessor controlled appliance. **(Fig. 2 Processor 206, column 5 lines 35-42 Smith)**

Consider **claim 40**, see claim 39.

Consider **claim 41**, see claim 39.

8. Claims **10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)**

further in view of **Sanders et al. (US Patent 5,742,713)**, as applied to claim 9 above,

and further in view of **Hendricks et al. (US Patent 6,738,978)**, herein Hendricks.

Consider **claims 10**, Freadman combined with Smith and Sanders, as in claim 9, clearly teaches a local area network.

However, Freadman combined with Smith and Sanders do not explicitly teach at least some of said computers are configured to receive digital data from the Internet via said wire.

In an analogous art Hendricks, which discloses a system for distributing television data, clearly teaches at least some of said computers are configured to receive digital data from the Internet via said wire. **(column 49 lines 57-62)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman combined with Smith and Sanders by allowing at least some of said computers are configured to receive digital data from the Internet via said wire, as taught by Hendricks, for the benefit of providing diverse entertainment sources.

Consider **claims 11**, Freadman combined with Smith and Sanders, as in claim 9 above, clearly teaches a local area network.

However, Freadman combined with Smith and Sanders do not explicitly teach at least some of said computers are configured to receive FM audio signals via said wire.

In an analogous art Hendricks, which discloses a system for distributing television data, clearly teaches at least some of said computers are configured to receive FM audio signals via said wire. **(column 26 lines 37-39)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman combined with Smith and Sanders by allowing at least some of said computers are configured to receive FM audio signals via said wire, as taught by Hendricks, for the benefit of providing diverse entertainment sources.

9. Claims **36 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)**

further in view of **Coutinho (US Patent 5,760,822)** and further in view of **Sanders et al.**

(US Patent 5,742,713), as applied to claim 34 above, and further in view of **Hendricks et al. (US Patent 6,738,978)**.

Consider **claim 36**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly teaches a local area network.

However, Freadman combined with Smith, Coutinho and Sanders do not explicitly teach at least some of said computers are configured to receive digital data from the Internet via said wire.

In an analogous art Hendricks, which discloses a system for distributing television data, clearly teaches at least some of said computers are configured to receive digital data from the Internet via said wire. **(column 49 lines 57-62)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman combined with Smith, Coutinho and Sanders by allowing at least some of said computers are configured to receive digital data from the Internet via said wire, as taught by Hendricks, for the benefit of providing diverse entertainment sources.

Consider **claim 37**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly teaches a local area network.

However, Freadman combined with Smith, Coutinho and Sanders do not explicitly teach at least some of said computers are configured to receive FM audio signals via said wire.

In an analogous art Hendricks, which discloses a system for distributing television data, clearly teaches at least some of said computers are configured to receive FM audio signals via said wire. **(column 26 lines 37-39)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman combined with Smith, Coutinho and Sanders by allowing at least some of said computers are configured to receive FM audio signals via said wire, as taught by Hendricks, for the benefit of providing diverse entertainment sources.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN R. SCHNURR whose telephone number is (571)270-1458. The examiner can normally be reached on Monday - Friday, 8:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2421

JRS